

102. (NEW) The computer readable medium of claim 100, wherein the first input is indicative of the volume amount of polymeric material in a shot of admixed polymeric material and blowing agent.

103. (NEW) The computer readable medium of claim 1, further comprising an act of:

(C) receiving a second input indicative of a mass of blowing agent to be admixed with the polymeric material.

104. (NEW) The computer readable medium of claim 1, further comprising an act of:

(C) receiving a second input indicative of a weight percentage of blowing agent to be admixed with the amount of polymeric material.

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105. (NEW) The computer readable medium of claim 104, wherein the polymer processing apparatus includes a blowing agent delivery system to provide the blowing agent to the polymeric material in the polymer processing space, and further comprising an act of (D) configuring the blowing agent delivery system to provide the blowing agent to the polymeric material in the polymer processing space based on the first input and the second input.

106. (NEW) The computer readable medium of claim 105, wherein the polymer processing apparatus includes a screw housed within a barrel and further comprising an act of (E) receiving a third input indicative of a position of the screw within the barrel,

wherein the act (D) includes configuring the blowing agent delivery system to provide the blowing agent to the polymeric material in the polymer processing space based on the first input, the second input and the third input.

107. (NEW) The computer readable medium of claim 105, further comprising an act of:

(E) monitoring an actual flow rate of the blowing agent that is provided to the polymeric material in the polymer processing space.

108. (NEW) The computer readable medium of claim 105, further comprising an act of:

(E) determining an actual mass of the blowing agent that is provided to the polymeric material in the polymer processing space.

109. (NEW) The computer readable medium of claim 105, wherein the blowing agent delivery system includes at least one valve through which blowing agent is provided to the polymeric material in the polymer processing space, and further comprising the act of:

(E) receiving a third input indicative of a valve opening condition of the at least one valve; and

(F) controlling an opening of the at least one valve based upon the valve opening condition.

110. (NEW) The computer readable medium of claim 105, further comprising an act of:

(E) receiving a third input indicative of an actual melt pressure of the polymeric material within the polymer processing space;

wherein the act (C) includes an act of setting a pressure of the blowing agent to be provided to the polymeric material in the polymer processing space by the blowing agent delivery system approximately 50-100 psi above the actual melt pressure of the polymeric material.

111. (NEW) The computer readable medium of claim 105, further comprising an act of:

(D) receiving a third input indicative of a desired melt pressure of the polymeric material within the polymer processing space;

wherein the act (D) includes an act of setting a pressure of the blowing agent to be provided to the polymer processing space by the blowing agent delivery system approximately 50-100 psi above the desired melt pressure of the polymeric material.

112. (NEW) The computer readable medium of claim 111, further comprising an act of:

(E) monitoring an actual pressure of the polymeric material within the polymer processing space.

113. (NEW) The computer readable medium of claim 112, further comprising an act of:

(F) monitoring an actual pressure of the blowing agent that is provided to the polymer processing space by the blowing agent delivery system.

114. (NEW) The computer readable medium of claim 113, further comprising an act of:

(G) providing an indication to a user of the polymer processing apparatus when one of: the actual pressure of the polymeric material within the polymer processing space is not approximately equal to the desired melt pressure; and

the actual pressure of the blowing agent is more than approximately 100 psi above the desired melt pressure of the polymeric material.

115. (NEW) The computer readable medium of claim 105, further comprising an act of:

(E) monitoring an actual mass of blowing agent that is provided to the polymer processing space by the blowing agent delivery system.

116. (NEW) The computer readable medium of claim 115, further comprising an act of:

(F) determining a calculated mass of blowing agent that is provided to the polymer processing space by the blowing agent delivery system based on the first input and the second input.

117. (NEW) The computer readable medium of claim 116, further comprising an act of:

(G) providing an indication to a user of the polymer processing apparatus when the actual mass of blowing agent that is provided to the polymer processing space by the blowing agent delivery system is not approximately equal to the calculated mass.

118. (NEW) The computer readable medium of claim 105, wherein the polymer processing apparatus includes a screw housed within a barrel and a screw back pressure regulator, and further comprising acts of:

(D) receiving a third input indicative of an actual pressure of polymeric material within the polymer processing space; and

(E) controlling a back pressure provided on the screw by the screw back pressure regulator based on the actual pressure of polymeric material within the polymer processing space.

119. (NEW) The computer readable medium of claim 1, wherein the first input is indicative of the amount of polymeric material in a shot of admixed polymeric material and blowing agent and further comprising an act of:

(C) receiving a second input indicative of a mass of blowing agent to be admixed with the polymeric material.

120. (NEW) The computer readable medium of claim 1, wherein the first input is indicative of the amount of polymeric material in a shot of admixed polymeric material and blowing agent and further comprising an act of:

(C) receiving a second input indicative of a weight percentage of blowing agent to be admixed with the amount of polymeric material.

121. (NEW) The computer readable medium of claim 1, further comprising an act of:

(C) monitoring an actual flow rate of the blowing agent that is provided to the polymer processing space.

122. (NEW) A computer readable medium encoded with a program that, when executed on a controller of a polymer processing apparatus, performs a method comprising acts of:

(A) receiving a first input indicative of a flow rate of blowing agent to be admixed with polymeric material in a polymer processing space of a polymer processing apparatus, the polymer processing apparatus including a blowing agent delivery system to provide the blowing agent to the polymeric material in the polymer processing space, the blowing agent delivery system including at least one valve through which the blowing agent is provided to the polymeric material in the polymer processing space;

(B) receiving a second input indicative of an open time of the at least one valve; and

(C) configuring the blowing agent delivery system to provide the blowing agent to the polymeric material in the polymer processing space based on the first input and the second input.

123. (NEW) The computer readable medium of claim 122, wherein the act (C) includes an act of determining an amount of blowing agent to be admixed with the polymeric material in the polymer processing space.

124. (NEW) The computer readable medium of claim 122, wherein the polymer processing apparatus includes a screw housed within a barrel and further comprising an act of

(D) receiving a third input indicative of a position of the screw within the barrel,

wherein the act (C) includes configuring the blowing agent delivery system to provide the blowing agent to the polymeric material in the polymer processing space based on the first input, the second input and the third input.

125. (NEW) The computer readable medium of claim 122, further comprising an act of:

(D) monitoring an actual flow rate of the blowing agent that is provided to the polymeric material in the polymer processing space.

126. (NEW) The computer readable medium of claim 122, further comprising an act of:

(D) determining an actual mass of the blowing agent that is provided to the polymeric material in the polymer processing space.

127. (NEW) The computer readable medium of claim 122, further comprising the acts of:

(D) receiving a third input indicative of a valve opening condition of the at least one valve; and

(E) controlling an opening of the at least one valve based upon the valve opening condition.

128. (NEW) The computer readable medium of claim 122, further comprising an act of:

(D) receiving a third input indicative of an actual melt pressure of the polymeric material within the polymer processing space;

wherein the act (C) includes an act of setting a pressure of the blowing agent to be provided to the polymeric material in the polymer processing space by the blowing agent delivery system approximately 50-100 psi above the actual melt pressure of the polymeric material.

129. (NEW) The computer readable medium of claim 122, further comprising an act of:

(D) receiving a third input indicative of a desired melt pressure of the polymeric material within the polymer processing space;

wherein the act (C) includes an act of setting a pressure of the blowing agent to be provided to the polymer processing space by the blowing agent delivery system approximately 50-100 psi above the desired melt pressure of the polymeric material.

130. (NEW) The computer readable medium of claim 129, further comprising an act of:

(E) monitoring an actual pressure of the polymeric material within the polymer processing space.

131. (NEW) The computer readable medium of claim 130, further comprising an act of:

(F) monitoring an actual pressure of the blowing agent that is provided to the polymer processing space by the blowing agent delivery system.

132. (NEW) The computer readable medium of claim 131, further comprising an act of:

(G) providing an indication to a user of the polymer processing apparatus when one of:  
the actual pressure of the polymeric material within the polymer processing space is not approximately equal to the desired melt pressure; and  
the actual pressure of the blowing agent is more than approximately 100 psi above the desired melt pressure of the polymeric material.

133. (NEW) The computer readable medium of claim 122, further comprising an act of:

(D) monitoring an actual mass of blowing agent that is provided to the polymer processing space by the blowing agent delivery system.

134. (NEW) The computer readable medium of claim 133, further comprising an act of:

(E) determining a calculated mass of blowing agent that is provided to the polymer processing space by the blowing agent delivery system based on the first input and the second input.

135. (NEW) The computer readable medium of claim 134, further comprising an act of:

(F) providing an indication to a user of the polymer processing apparatus when the actual mass of blowing agent that is provided to the polymer processing space by the blowing agent delivery system is not approximately equal to the calculated mass.

136. (NEW) The computer readable medium of claim 122, wherein the polymer processing apparatus includes a screw housed within a barrel and a screw back pressure regulator, and further comprising acts of:

(D) receiving a third input indicative of an actual pressure of polymeric material within the polymer processing space; and

(E) controlling a back pressure provided on the screw by the screw back pressure regulator based on the actual pressure of polymeric material within the polymer processing space.

137. (NEW) The method of claim 56, wherein the first input is indicative of the amount of polymeric material in a shot of admixed polymeric material and blowing agent.

138. (NEW) The method of claim 137, wherein the first input is indicative of the mass amount of polymeric material in a shot of admixed polymeric material and blowing agent.

139. (NEW) The method of claim 137, wherein the first input is indicative of the volume amount of polymeric material in a shot of admixed polymeric material and blowing agent.

140. (NEW) The method of claim 56, further comprising an act of (C) receiving a second input indicative of a mass of blowing agent to be admixed with the polymeric material.

141. (NEW) The method of claim 56, further comprising an act of (C) receiving a second input indicative of a weight percentage of blowing agent to be admixed with the amount of polymeric material.

142. (NEW) The method of claim 56, wherein the first input is indicative of the amount of polymeric material in a shot of admixed polymeric material and blowing agent and further comprising an act of:

(C) receiving a second input indicative of a mass of blowing agent to be admixed with the polymeric material.

143. (NEW) The method of claim 56, wherein the first input is indicative of the amount of polymeric material in a shot of admixed polymeric material and blowing agent and further comprising an act of:

(C) receiving a second input indicative of a weight percentage of blowing agent to be admixed with the amount of polymeric material.

144. (NEW) The method of claim 56, further comprising an act of:

(C) monitoring an actual flow rate of the blowing agent that is provided to the polymer processing space.

**CONCLUSION**

Claims 100-144 have been added. The newly added claims are supported throughout the specification. No new matter has been added. Claims 1-144 are now pending. A favorable first Office Action is respectfully requested.

If for any reason the Examiner is of the opinion that a telephone conversation would expedite prosecution, the Examiner is invited to contact the undersigned at (617) 720-3500. Please charge any fee or any fee deficiency occasioned by this Preliminary Amendment to Deposit Account No. 23/2825.

Respectfully submitted,  
*Roland Y. Kim et al., Applicant*

By:

  
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Robert H. Walat, Reg. No. 46,324  
Timothy J. Oyer, Reg. No. 36,628  
WOLF, GREENFIELD & SACKS, P.C.  
600 Atlantic Avenue  
Boston, MA 02210  
(617) 720-3500

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